Massachusetts Urban & Community Forestry Program

The Citizen Forester

NOVEMBER 2012

"Fall" in New England

By Rick W. Harper
Extension Assistant Professor,
UMass-Amherst

The combination of tree species and climate-type that we experience here in Massachusetts, allows us in the Northeast to enjoy what few others in the world (except parts of Asia) enjoy – the fall colors that are part of the hallmark of living in New England.

As days shorten and nights cool, the flow of nutrients between the succulent leaves of our deciduous woodies and the tree itself begins to progressively slow. Chemical changes occur within the plants leaves including the increased formation of abscissic acid and a reduction in auxin levels. These changes help to stimulate the formation of an abscission layer – the location where the petiole meets the branch that eventually becomes "walled off" from the rest of the plant, helping to preclude water loss and disease infestation and eventually leading to leaf "fall". As ethylene levels begin to build, the abscission layer starts to form in earnest and photosynthesis slows significantly. With less and less of the green pigment chlorophyll remaining, we see more and more of the variety of orange and yellow pigments (carotenoids) that were originally "masked" by the green coloration. Some species that are known for their "yellow – orange" appearance include many of the birches (*Betula* spp.), hickories (*Carya* spp.), lindens (*Tilia* spp.), ash (*Fraxinus* spp.), and beech (*Fagus* spp.). While we know carotenoids perhaps for their colorful contributions to sweet potatoes, carrots, mums and sunflowers, they also are believed to play an active role in photosynthesis and help to maintain the integrity of chlorophyll when exposed to oxygen and light.

What about the other varieties of color that we see in the fall? Anthocyanins are pigments known to form when concentrations of sugar remain in the leaves as the weather – particularly nights – begins to cool. So, when we experience sunny days and cool fall nights (and especially if we have acidic soils) we can enjoy the reds and purples present in some of our oaks (*Quercus* spp.), dogwoods (*Cornus* spp.), maples (*Acer* spp.) and black-gum (*Nyssa sylvatica*). So while we may be more familiar with anthocyanins perhaps for their espoused health benefits (they are in all sorts of purple-red fruits like blackberries, cranberries and cherries) or because they make a rose "red", we can't understate the invaluable contribution they make to leaf color here in the autumn.

The brilliant gold-orange color of the sugar maple – an excellent example of Autumn color change. Photo: R. Harper, Oct 2012

And what of those deciduous trees that don't shed at least some of their leaves? Marcescence is the term used to refer to the occurrence relating to trees "holding" their "deciduous" leaves. We often observe this occurrence with members of the Fagaceae (beech family) including American beech (*Fagus americana*) and some oaks (*Quercus* spp.). In these instances where we see leaves on some of these specimens throughout the winter, it is believed that the abscission layer simply hasn't fully formed on the "unshed" leaves until the commencement of the following growing season.

And until we welcome in our next season (i.e. winter), enjoy those fall colors!

Up Ahead:

Tree Steward Training

The Fisher Museum at Harvard Forest in Petersham once again hosted tree committee members, activists, municipal workers, and other interested folks for the 2012 Massachusetts Tree Steward Training. Participants from 12 municipalities across the state heard from a number of presenters on topics such as tree biology, tree identification, forest stewardship, and local wood, i-Tree, tree inventories, pruning emerald ash borer, soils, grants and funding, growing conditions over the past three years, and, of course, planting a tree. There were many opportunities for participants to network and learn what urban forestry activities are taking place in other municipalities throughout the state. Fifteen participants elected to stay overnight in the historic Fisher House, where they had even more opportunities to get to know each other and share ideas following dinner on Friday. We got some good feedback from participants and have lots of new ideas for next year's training. Look for information on next year's training in *The Citizen Forester*.

Picks and Shovels: Fall Color

The New York Times recently highlighted a local fall color destination, the Mohawk Trail. Read about this iconic road and what it has to offer at The New York Times.

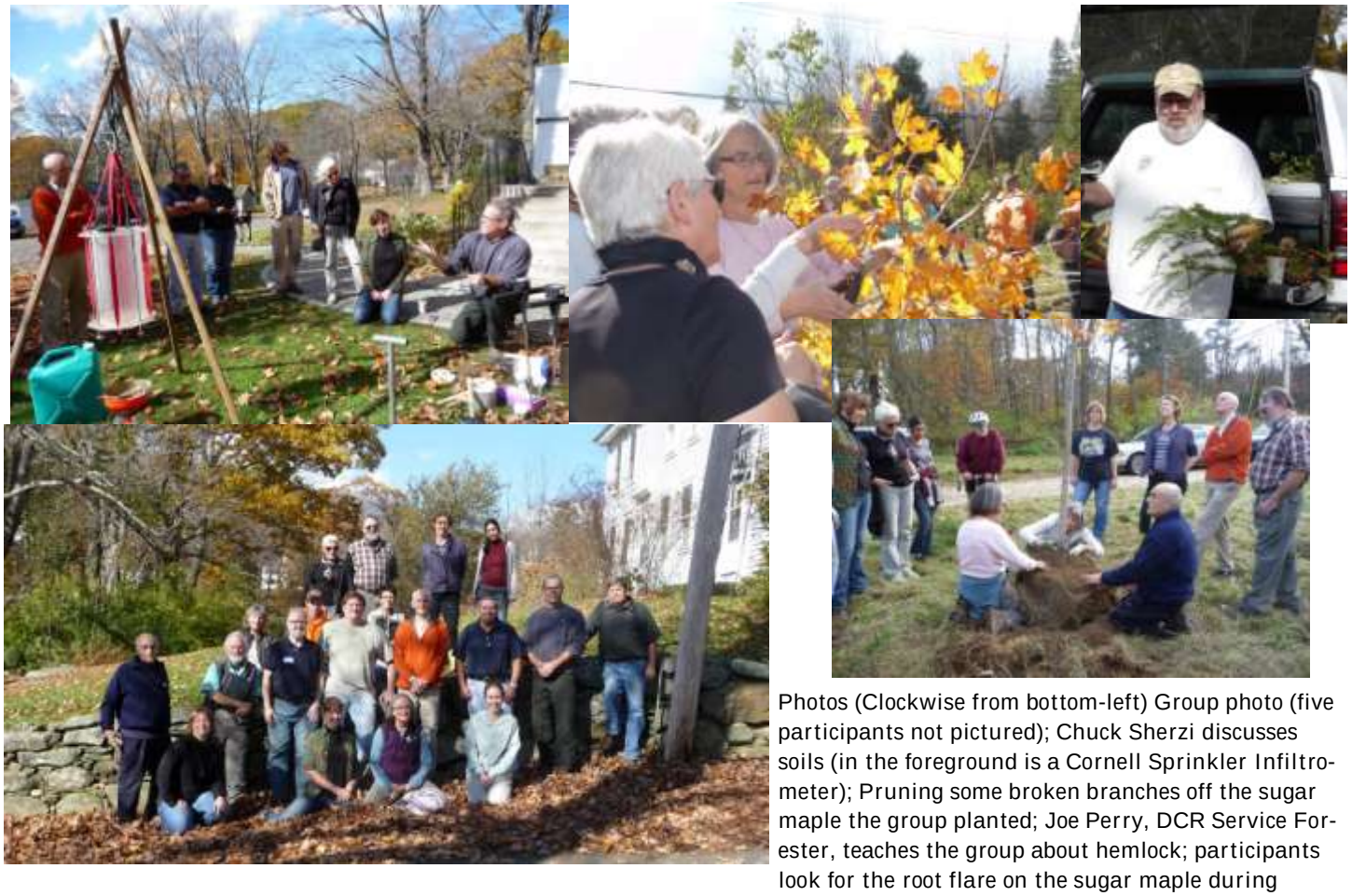
Read about the impact of climate change on the timing of fall color at Scientific American.

Discover more sources on how and why leaves change color at Harvard Forests's Leaf Color Bibliography.

Many Tree Steward Training attendees were sponsored by their communities or local businesses:

Town of Amherst
City of Gardner
City of Greenfield
Natick Town Forest Committee
Wheeler & Taylor Insurance, Great Barrington

Thank you for supporting tree stewards!



Photos (Clockwise from bottom-left) Group photo (five participants not pictured); Chuck Sherzi discusses soils (in the foreground is a Cornell Sprinkler Infiltrometer); Pruning some broken branches off the sugar maple the group planted; Joe Perry, DCR Service Forester, teaches the group about hemlock; participants look for the root flare on the sugar maple during planting.

Species Spotlight—Black gum, *Nyssa sylvatica*

By Mollie Freilicher
MA-DCR Community Action Forester

While the beauty of black gum in fall may be behind us, this native tree has lots to offer landscapes throughout the year. Black gum is naturally found from southwestern Maine, west to southern Ontario and east Texas, and south to Florida. It can even be found in some locations in Mexico. It grows in a variety of habitats, from rich alluvial valleys to upland hardwoods. It is known as black gum, black tupelo, tupelo, sour gum, and pepperidge. It is highly pyramidal when young, similar to pin oak, with the crown becoming conical or flat-topped as the tree matures. The branches are horizontal and droop down toward the tips. At maturity, black gum can reach 50 feet tall and 20-30 feet wide. Black gum can grow to over 100 feet tall. The Missouri state champion, recently destroyed in a windstorm, was one of the taller state champion black gums at 109 feet. The current national champion, 93 feet, is located in Wood County, TX. In Massachusetts, there are black gums that have reached over 400 years of age. Black gum is hardy in USDA zones 4-9.

The leaves, a lustrous green color, are alternate, simple, ovate, and 3-6 inches long. In fall, they consistently become scarlet, almost purple in color, providing a wonderful fall display. The bark is dark gray and, with its deep ridges, achieves a blocky appearance (somewhat similar to the bark of last month's species common persimmon.) The flowers, not ornamentally important, are polygamo-dioecious and appear with the leaves. The fruit develops on female trees only and is a half-inch-long drupe, bluish-purplish in color that ripens in the early fall. The fruit provides high levels of crude fat, fiber, phosphorous, and calcium, making it an important food source for birds and wildlife.

According to the 1846 book *A Report on Trees and Shrubs Growing Naturally in the Forests of Massachusetts*, historically wood from black gums was not used widely except in the naves of wheels in the south. It has been used to turn bowls, and due to its toughness, it was used in aqueducts. More recently, black gum has been used in furniture, shipping containers, cross ties, bridge ties, and factory flooring where floors were subjected to heavy wear, but it is not a commercially important species.

Black gum makes a handsome specimen tree and can be used as a street tree in areas where it will not be exposed to high levels of salt. It will grow best in full sun, at a site with well-drained, acidic soil. The taproot on black gum can make it difficult to transplant and Michael Dirr recommends planting it in the spring. The use of black gum in the landscape has been recognized for over 150 years (probably longer!) In the 1846 book *A Report on the Trees and Shrubs* (see above), the author states, "There is a tree of this kind in Cohasset, which was first pointed out to me by the Rev. Dr. Greenwood, a man of taste, who was a lover of trees, and which we rode twenty-five miles expressly to see. It is richly worth a much longer journey." An 1890 issue of *Garden and Forest* noted that "The foliage is abundant and lustrous, and in the autumn it assumes a brilliance and splendor of coloring unrivaled by that of our other trees. It is one of those trees which always attract attention—in the winter by its peculiar habit, in summer by the beauty of its foliage and in autumn by its coloring…" According to *Handbook of the Trees of New England* (Athenaeum Press, 1902), "Few trees are of greater ornamental value." Today, black gum continues to hold its ornamental value and provide beauty to the landscape.

Photos: Leaf and bark: Mollie Freilicher; fall color: Texas Agricultural Experiment Station; form: University of Kentucky; Fruit: Virginia Tech.

New Version of i-Tree Released

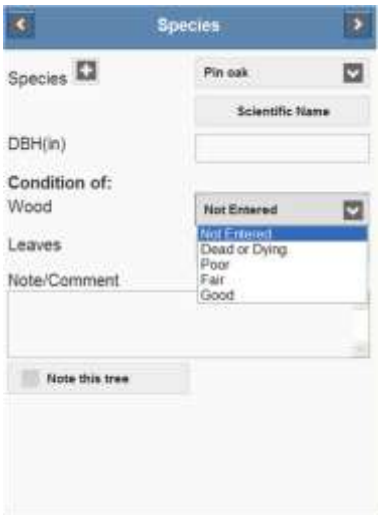
From the USDA Blog, 10/3/12
Posted by Jane Hodgins, Public Affairs Specialist, U.S. Forest Service Northern Research Station,
October 3, 2012 at 3:17 PM

When Dave Nowak of the U.S. Forest Service and Scott Maco of Davey Tree Expert Company began collaborating on the creation of a suite of urban forest analysis tools called i-Tree, they imagined that users would be mostly city foresters from the United States.

Six years later, the U.S. Forest Service is releasing i-Tree version 5.0 with changes inspired by users from 105 countries. Version 5.0 is upgraded to rapidly assess urban trees and forests throughout Canada and Australia, two of the countries leading i-Tree's international expansion.

"It's neat to see how this program has grown," Nowak said. "We didn't expect this kind of response, but the i-Tree partnership has done an outstanding job in reaching potential users."

City foresters certainly number among i-Tree users, but teachers, researchers, non-government organizations, consultants, and homeowners are also finding that the ability to calculate benefits such as energy savings and storm water interception is essential to urban natural resources management and stewardship.



One of the major updates to version 5.0 is the addition of a new web form that allows the use of smartphones and tablets. An entirely new function within i-Tree Design forecasts the growth and benefits of trees through time, based on species and location-specific growth models.

i-Tree version 5.0 includes many new options and enhancements to the existing applications, including the ability to survey historical Google images in i-Tree Canopy and the ability to use i-Tree Eco to assess the human health impacts of air pollution removal by trees.

More than 10,000 copies of i-Tree have been downloaded across the world since the free software suite was launched in 2006, and today international users make up the fastest growing segment of i-Tree users. Canada, Australia, India, the United Kingdom, and Italy are leading that expansion, but i-Tree is being used everywhere, from Ethiopia, to Pakistan and Papua, New Guinea, to Norway.

i-Tree was developed, supported and distributed through a group of partners including the U.S. Forest Service, Davey Tree Expert Company, National Arbor Day Foundation, Society of Municipal Arborists, International Society of Arboriculture, and Casey Trees. All programs are available free of charge at www.itreetools.org

Check out the changes here: http://www.itreetools.org/news/whats_new.php

One of the major highlights—

Web-based data collection

Tree v5.0 features a new web-based data collection system for the i-Tree Streets and Eco applications. This means that most devices with a modern internet browser, such as newer iPhones, Android devices, or tablets, can be used to collect and enter field data. Web form rendering and operation will differ, based on a device's operating system, web browser, and data caching ability. Learn more>

i-Tree October Newsletter
Virginia Street Tree Assessment Using i-Tree
Kitchener Ontario's i-Tree ECO Study
Street Tree Assessment and Stewardship Report for Radford, VA Street Tree Assessment and Stewardship Report for Radford, VA

Smart Phone Apps for Urban Forestry and Arboriculture

Dudley Hartel, of the USDA Forest Service's Urban Forestry South Center, presented at Alabama's state urban forestry conference and discussed many of the apps available for field work and some of the limitations of currently available apps and the apps he uses regularly. See a PDF of his presentation at Urban Forestry South.

Tree City USA: How and Why Should I Apply?

Can I Apply for Tree City USA for my community?

Tree City USA is a national program of the Arbor Day Foundation that recognizes communities for urban forest management. It is not just for "cities," but for communities of all sizes.

To become a Tree City USA, your community must meet for standards set by the Arbor Day Foundation:

1. Tree Board or Department: For many communities in Massachusetts, tree management falls under public works or another department, and this is perfectly acceptable for Tree City USA. On the application, indicate who is in charge of managing trees in your community.
2. Community Tree Ordinance: In Massachusetts, we have a statewide ordinance under Mass. General Laws, Chapter 87 that satisfies this standard, if your community does not have an ordinance of its own. We ask for documentation that your community enforces Chapter 87, such as a newspaper clipping for a tree hearing or documentation that your community has adopted this law.
3. Community Forestry Program with a Budget of at Least $2.00 per capita: Many types of spending can be included in the budget to reach $2.00 per capita including, but not limited to:
    - Salaries
    - Tree planting (trees, labor, equipment, planting materials, watering, mulching, etc.)
    - In-house tree maintenance (pruning, insect and disease control, storm response, fertilization, watering, stump removal, equipment, supplies, etc.)
    - Contracted tree work
    - Vehicular expenses (fuel, maintenance, depreciation, vehicle purchases, insurance)
    - Public outreach and staff training (advertising, public education, professional training, professional memberships, Arbor Day event expenses, etc.)
    - Resource Assessment Expenses (survey and inventory expenses, software, consultants, etc.)
    - Tree Board/Volunteer time ($10/hour)
    - Grant Income
    - Leaf brush pick-up (up to 20% of cost can be included)
    - Biomass recycling (up to 20% of cost can be included)
    - Utilities (up to 20% of utility tree work can be included)
4. Arbor Day Event and Proclamation: Tree plantings, seedling distributions, public presentations, school assemblies, festivals, and other activities can be Arbor Day celebrations. The proclamation is a document signed by your mayor or board of selectmen (there are samples on the Arbor Day Foundation website) that declares a day of your choosing to be Arbor Day in your community.

Benefits of Tree City USA

A community's status as a Tree City USA is considered for applications to the DCR Challenge Grant Program, but the biggest benefit to your community may be in public relations for your city or town. Residents can feel a sense of community pride as they drive past "Tree City USA" signs as they enter the community, and visitors can take notice, too. We have some towns and cities in the state that have been Tree City communities for over 20 years and take it as a major point of pride. Annual Arbor Day events also offer an opportunity for publicity highlighting environmental activities, enhancing the public image of the community. Communities may also use Tree City USA as an initial step toward systematic urban tree management. Whatever the reasons, your community will benefit from joining Tree City USA.

Applications for 2012 recognition are due December 31, 2012. Up-to-date information can be found online at the DCR Urban & Community Forestry website.

For more information on how your community can apply, contact Mollie Freilicher, 413-577-2966 or mollie.freilicher@state.ma.us.

Growing Greener—in Springfield

By Mollie Freilicher
MA-DCR Community Action Forester

The Citizen Forester highlighted Springfield's planting efforts related to tornado recovery in the February 2012 issue, but a recent planting program the city implemented this summer merits another look at what is happening in the Western Massachusetts City with its new non-profit ReGreen Springfield.

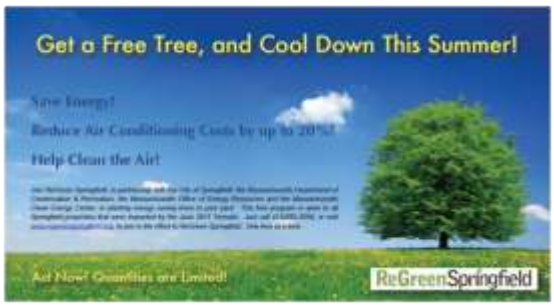
A Davey crew marks a tree location.

ReGreen Springfield, in partnership with the City of Springfield, the Department of Energy Resources, The Massachusetts Clean Energy Center, and the Department of Conservation and Recreation recently completed planting 1,140 trees for energy savings. The group received a $510,000 grant from the Massachusetts Clean Energy Center to plant trees on public and private property, at no cost to the property owners in the city, in areas impacted by the tornado of 2011. The funding came from the American Recovery and Reinvestment Act of 2009.

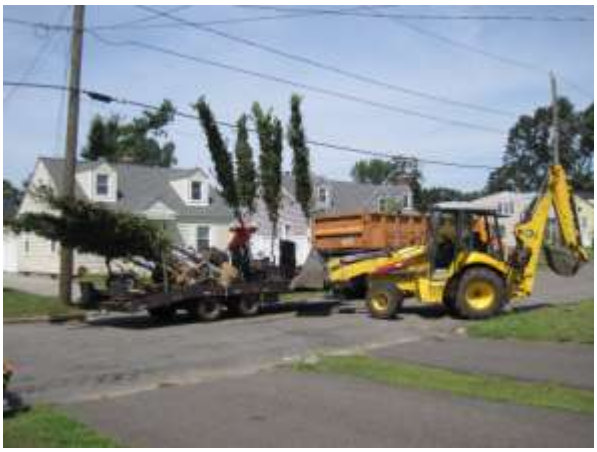
A 2011 study by the USDA Forest Service Northern Research Station showed that tree canopy in areas impacted by the tornado in Springfield decreased from approximately 44%, in a control area outside the tornado zone, to less than 1%, in the tornado zone. Residents in the tornado zone experienced daytime temperatures that were 1-2 degrees Celsius (approximately 2-4 degrees Fahrenheit) hotter during the summer than a neighborhood that the tornado spared. Increased temperatures result in greater use of electricity for cooling and thus represent an opportunity for energy-saving measures such as tree planting.

Students providing information to shoppers at Big Y

The opportunity came about quickly and ReGreen Springfield and the City coordinated efforts to get the trees in the ground. To spread the word about the program, ReGreen Springfield developed some marketing materials and did a direct mailing, sending a card about the planting program to thousands of households in tornado-impacted ZIP codes. The group also worked with local youths who distributed information about the program at local businesses, who graciously allowed ReGreen to spread the word at their storefronts. Participating businesses included Pride gas stations, Big Y, Stop & Shop, Walgreens, Hampden Bank, and the Springfield farmer's market at Forest Park. These volunteers also distributed a gator bag to residents who had received more than one tree on their property, to ensure that trees would remain well-watered through the hot, dry summer.



Marketing postcard for the planting program.



Central Nurseries gets ready to move some trees to their future home.

The program was modeled after the MA-DCR program in Worcester County to replant following losses to the Asian longhorned beetle. The City contracted with Davey Tree Expert Company to bring in a team of arborists to canvass neighborhoods and meet with residents to find locations for trees that would maximize energy sav-

(Continued on page 7)

Growing Greener—in Springfield

(Continued from page 6)

ings. A coordinator handled all the phone and email requests, scheduled appointments, and worked with the Davey crews and the planting contractor. One to two teams of arborists spread out throughout the tornado zone, spending about half an hour with residents going over details on species, locations, and ensuring that trees were planted in the "right places," avoiding conflicts with underground and overhead utilities as well as other infrastructure.

Central Nurseries from Johnston, RI was responsible for sourcing the stock and planting the trees and had one to two crews on the ground each week of the five-week planting. Some trees were dug with machinery and others were dug by hand in hard-to-access back and side yards. The trees ranged in caliper size from 2" to 3.5," making the impact of the planting immediate. The crews did a great job getting trees into the ground.

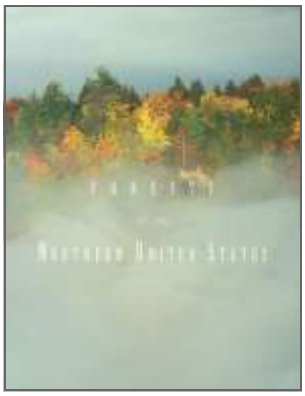
Following the planting, Davey crews returned to each tree with a GPS-enabled device to verify the location and species and collect some additional information that will assist in calculating future energy savings from these trees.

A Davey crew checks planting depth on a tree.

Residents were thrilled to receive trees and see some more green return to their neighborhoods. For most in the area, the rebuilding process is nearly complete and one of the last tasks is regreening. The trees planted under this energy-savings program not only will benefit residents' cooling bills, but will provide years of shade and enjoyment as they grow.

Forests of the Northern United States—Publication from USDA

A new publication from the USDA Forest Service Northern Research Station explores the issues facing forests in the northern United States including trends, threats, and opportunities. From the abstract: "This report uses the Montreal Process to summarize current conditions and recent trends in seven categories - biodiversity; forest productive capacity; forest ecosystem health; soil and water resources; forest carbon and biomass; long-term socioeconomic benefits; and the legal, institutional, and economic framework for sustainable management - and adds an eighth category to reflect the importance of urban and community forests to the Northern States." Read the full report or order a hard copy at the Northern Research Station: http://www.nrs.fs.fed.us/pubs/40189. (For the urban and community forests section only, click here: http://www.nrs.fs.fed.us/pubs/40230).



What's Happening on The Grove?

The Grove is an advertising-free, networking website that is a partnership between the USDA-Forest Service and the Georgia Urban Forest Council. Sign up for free and join the Massachusetts Grove and read about and post information on tree planting and urban forestry activities in your community. Share pictures or stories from events, post information for an upcoming project, recruit volunteers, and learn about urban forestry activities in your state and around the country by joining The Grove.

Stories recently posted on the Grove:

Hone your Urban Forestry Knowledge!
Invite Songbirds to your backyard
The Care and Planting of Tree Seedlings on your Woodland.
Fall Tips For Planting Trees and Shrubs
Urban Forest Symphony
Use i-tree Design to plan where to plant your tree for most impact

Check in with the Grove as often as you like, or simply receive emails when we make updates to the Massachusetts Grove: www.massachusettsgrove.org

News

Arborists Stumped Over String of Burl Burglaries

By *Katheleen Conti* | Globe Staff

Boston, MA— October 03, 2012 The gash to the silver linden tree in Evans Way Park in the Fenway neighborhood was so fresh, so raw that sawdust still sat sprinkled at the base of the trunk.

The 60-foot-tall linden had been the victim of a nighttime mugging. Clandestine vandals armed with chain saws and hand saws have recently been gouging burls from trees in Franklin Park, the Riverway, and the Jamaicaway, in what could signal a burgeoning underground market for the valuable trunk knots. Read the full story at The Boston Globe and read about the apprehension of suspects at News 7.

Tracking Burlington's Urban Forests

By Cat Viglienzoni | Monday, October 1, 2012

Burlington, VT - More than 200 freshman from the University of Vermont are taking to the streets of Burlington, all part of a new effort to quantify the benefits of the city's urban forests. Groups of three from UVM's environmental school will visit 200 randomly-selected spots, taking note of any vegetation in their area. The program -- part of one of their classes -- began last year and continues this year. "It's a lot of fun to be able to go out every week and not sit in a classroom for four hours. We get to go out into the real world," says environmental studies freshman Kelsey Tustin. New technology is driving their studies. Read the full story at WCAX.com

Replenishing Houston's Canopy, One Tree at a Time

By Kathy Huber | Monday, October 1, 2012

It arrived without the sound and fury of a hurricane, but as a silent, slow-moving killer that crept across Texas taking our trees. Millions of trees have died as a result of the 2011 drought: 301 million in state rural and forestlands, plus 5.6 million in our urban areas, according to the Texas A&M Forest Service. The drought was a big-scale event with local pockets of drama, says Pete Smith, partnership coordinator for the service's Urban Forestry Program. Among the most dramatic is Houston's 1,466-acre Memorial Park, its once-dense canopy reduced by half. The region was in mourning.

Read the full story at The Houston Chronicle.

A Seattle First: Parks with Sustainable Urban Forests

Seattle has earned a distinction that no other metropolitan area can boast: forested parkland that meets the highest international standards in sustainable forest management. The Forest Stewardship Council certification means the Seattle park system meets the gold standard in environmentally-friendly forestry.

Read (or listen to) the complete story at Oregon Public

Building Self-Sufficiency, One Tree at a Time

By Beth Hoffman | Thursday, October 11, 2012

When a community is listed as one of the poorest counties in the United States and has more than 50 percent of its population living in poverty, the options for its future may seem bleak. But for Byron Buffalo, lay minister at the United Church of Christ in Bridger, South Dakota, the designation was a call to arms. Or a call to plant as the case may be. And more than 35,000 people joined him online in support. Read the full story at Forbes.com.

50% of retail firewood infested with insects

ScienceBlog.com, 10/09/12

A new study published in the Journal of Economic Entomology reports that live insects were found in 47% of firewood bundles purchased from big box stores, gas stations and grocery stores in Colorado, New Mexico, Utah and Wyoming. Untreated firewood can harbor pathogens and destructive insects such as the emerald ash borer, the Asian longhorned beetle, bark beetles and others, and transport them to uninfested areas. Read the full story at ScienceBlog.com.

An Economic Analysis of Emerald Ash Borer Management Options

ScienceDaily (Feb. 9, 2012) — Lanham, MD; February 9, 2012 -- In "Economic Analysis of Emerald Ash Borer Management Options," a recent study published in the *Journal of Economic Entomology*, the authors performed an economic analysis of management options to aid decision makers in preparing for likely future infestations. A relative economic analysis was used to compare a control option (do-nothing approach, only removing ash trees as they die) to three distinct management options: 1) preemptive removal of all ash trees over a 5 yr period, 2) preemptive removal of all ash trees and replacement with comparable non-ash trees, or 3) treating the entire population of ash trees with insecticides to minimize mortality. Read the complete story at ScienceDaily.

Growing on Trees

Upcoming Courses from the New England Wildflower Society

Check out all classes at: http://www.newfs.org/learn/adult/all-classes

Pruning Fundamentals

Proper pruning improves both the health and structure of woody plants and allows the gardener to influence the aesthetic qualities of trees and shrubs. This workshop covers pruning methods for established plantings in the home landscape. Learn how to select basic tools, make a proper cut, determine which branches to cut, and know the correct time to prune for different species. Bring hand pruners to try various cuts at a local site nearby.
Date & Time: Saturday, November 10, 2012, 9:30 a.m.-12:30 p.m. Location: Garden in the Woods, Framingham, MA Course Code: hor3120 · Instructor: Dave Ropes Fee: $40 (Member) / $48 (Nonmember) · Limit: 16 Credit: Elective-HD/Adv. HD

Shrubs in Winter

The leaves are nearly gone from most shrubs, but you can still learn to recognize them. In this class, we focus on a number of macro-characteristics such as branching patterns, growth habits, bark, persistent fruit, galls, and habitats to help us identify more than 20 native New England shrubs in late fall and winter. We also discuss the natural history of the shrubs we see. The program begins with a classroom session and then moves into the field. Look for such species as witch-hazel (*Hamamelis virginiana*), highbush blueberry (*Vaccinium corymbosum*), and, of course, winterberry (*Ilex verticillata*) and wintergreen (*Gaultheria procumbens*). Bring a bag lunch and a hand lens.
Date & Time: Saturday, December 8, 2012, 10 a.m.-2:30 p.m. Location: Garden in the Woods, Framingham, MA Course Code: bot3312 · Instructor: Roland "Boot" Boutwell, naturalist Fee: $53 (Member) / $64 (Nonmember) · Limit: 16 Credit: Elective--all certificates

Naked Shrubs

No leaves? No problem! Use a combination of branching patterns, bud and bark characteristics, habitat, persistent fruits, galls, and marcescent leaves to identify shrubs in winter. The program begins with a short session indoors. Then travel to a nearby site for a close look at 15-20 native New England shrubs plus a couple of non-native invasives. Return indoors for a twig or slide quiz and a cup of something hot. A wonderful introduction to shrub ID in winter as well as a good review for those who have taken "Native New England Shrubs." Bring lunch and a hand lens if you have one. Be sure to dress for the weather. "There is no bad weather, only improper clothing!"
Date & Time: Saturday, January 19, 2013, 10 a.m.-2 p.m. Location: Arcadia Wildlife Sanctuary, Easthampton, MA Course Code: fdt1114 · Instructor: Roland "Boot" Boutwell, naturalist Fee: $20 (Member) / $25 (Nonmember) · Limit: 16 Credit: Field--FB/Adv FB Cosponsor: MA Audubon, Arcadia

Plant Systematics Module 2

This second of five Plant Systematics modules examines tracheophyte families, starting with free-sporing plants (i.e., ferns and fern allies), and ending with three major groups of seed plants: non-flowering seed plants (i.e., conifers); magnoliids (i.e., primitive dicots); and monocots. With text and images, the talk describes critical characters for family-level identification and for representative genera in New England. The course will focus on modern taxonomy and family arrangements, as set forth by Judd et al., *Plant Systematics: A Phylogenetic Approach*.
Date & Time: Sunday, January 27, 2013, 1-4 p.m. Location: Garden in the Woods, Framingham, MA Course Code: bot2230 Instructor: Arthur Haines, Research Botanist, New England Wild Flower Society, author of *Flora Novae Angliae* Fee: $46 (Member) / $54 (Nonmember) · Limit: 20 Credit: Core-Adv.FB/Elective-all certificates

Winter Botany

This course includes a classroom lecture on the taxonomic characteristics of trees, shrubs, and herbaceous and evergreen plants in winter, including hands-on identification of twig and plant specimens, followed by a walk around Garden in the Woods to put your classroom knowledge to work. Learn the significance of macro and micro characteristics, including growth habit, bud morphology, phyllotaxy, leaf and bundle scars, floral patterns, and fruits. Acquire experience with an extensive array of classroom specimens and field identification of woody plants. Gain confidence using a key to identify unknown specimens, whether you are a beginning or experienced botanist. The program provides lecture notes and twig samples to take home. Bring a hand lens and bag lunch and dress for the weather.
Date & Time: Saturday, February 9, 2013, 9:30 a.m.-3:30 p.m. Location: Garden in the Woods, Framingham, MA Course Code: bot3317 · Instructor: William Kuriger, Ph.D. Fee: $80 (Member) / $96 (Nonmember) Limit: 16 Credit: Elective--all certificates; Continuing Forestry Education 1 credit

Growing on Trees

League City, Texas Moves 100-Year-Old Compton Oak to Make Room for Highway

When a planned a highway widening project threatened the historic Ghirardi Compton oak in League City, TX, the city began a discussion of what to do with the tree. A grassroots effort in the city promoted moving the tree. After several months, the council voted to move the tree 1,500 feet to donated land adjacent to a planned park. The council hired a landscape construction company that prepared the tree and carried out the move—a process that took almost a month—and required steel girders, two cranes, three excavators and other heavy construction equipment. The tree, 70 inches in diameter, 56 feet tall, and 100 feet wide, weighed in at 518,000 pounds once prepped and ready to go. Developer fees (that can only be used for park projects) and a donation from Trees of Houston covered the cost of the move, nearly $200,000. Compton oaks (*Quercus x comptoniae*) are a rare natural hybrid between live oak (*Quercus virginiana*) and overcup oak (*Quercus lyrata*) and are found in Alabama, Mississippi, Louisiana, and Texas.

To watch a 5-minute video on the move, go to: http://youtu.be/BFTj0hM3DHM

Thanks to Hope Crolius, of the Amherst Public Shade Tree Committee, for passing along this story.

Top left: public support for the tree (Galveston County Daily News/Kevin Cox). Right: preparing the tree (Leaguecity.com).

Sustainable SITES Initiative Public Comment Period

The Sustainable Sites Initiative™ (SITES™) is an interdisciplinary effort by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden to create voluntary national guidelines and performance benchmarks for sustainable land design, construction, and maintenance practices. Major funding for the Sustainable Sites Initiative is provided by the Meadows Foundation and Landscape Structures.

Public Comment Period Opens

SITES has opened a public comment period seeking input on the proposed 2013 Prerequisites and Credits. This incorporates feedback received during the two-year pilot program and additional research from SITES staff and technical advisors. To provide comments, please click here. The public comment period will be open from September 26 - November 5, 2012. Learn more about the initiative.

Fiskars Project Orange Thumb Grant Application Open

There are 11 grant awards this year — Ten will receive $5,000 in cash and tools to help support their goals of neighborhood beautification and horticulture education, and one lucky applicant will receive a complete garden makeover! Deadline to apply is December15. For more information and to apply online, go to fiskars.com.

More News—Climate change

The Trouble with Trees

By Randy Rieland

It's the time of year when trees refuse to be ignored. Behold our fabulous hues, ponder our falling leaves, they goad us. And many of us do pay attention for a bit, only to lose interest when the show is over. We know the cycle will begin again next spring and peak again in the fall, trees being one of the truer things in modern life. I mean, what's more reliable than an oak? But scientists will tell you that, like the oceans, the world's trees are going through some serious changes, and not in a good way. Read the full story at Smithsonian.com.

Climate Change Could Cripple Southwestern U.S. Forests: Trees Face Rising Drought Stress and Mortality as Climate Warms

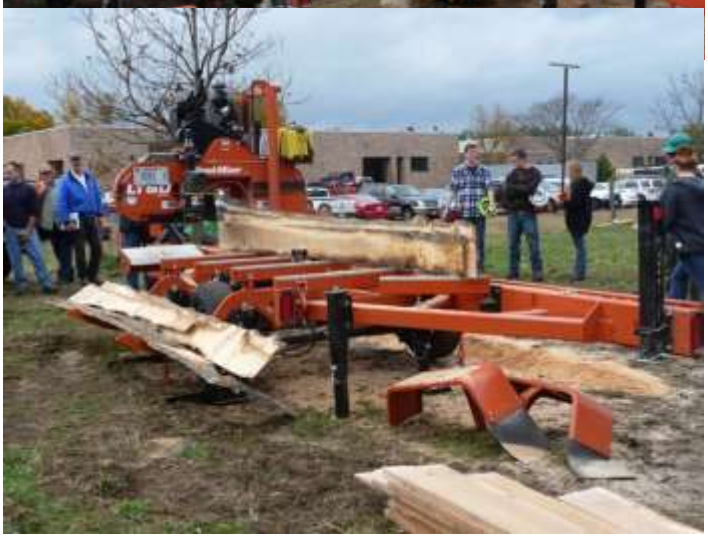
ScienceDaily (Sep. 30, 2012) — Combine the tree-ring growth record with historical information, climate records, and computer-model projections of future climate trends, and you get a grim picture for the future of trees in the southwestern United States. That's the word from a team of scientists from Los Alamos National Laboratory, the U.S. Geological Survey, the University of Arizona, and other partner organizations. If the Southwest is warmer and drier in the near future, widespread tree death is likely and would cause substantial changes in the distribution of forests and of species, the researchers report this week in the journal *Nature Climate Change*. Read the complete story at ScienceDaily.

Opportunity for Greener Cities as Urban Areas Forecast to Surge

By Alister Doyle (Reuters)

Oslo, Norway (October 16, 2012) – A U.N. study shows the world's urban areas are expected to expand from just over 3.5 billion today to 4.9 billion by 2030, presenting an opportunity to build greener and healthier cities. More parks, trees, and roof gardens could make cities less polluted, cooler, and healthier, as well as help protect plants, animals, and native pollinators such as bees. Read the complete story at the Alliance for Community Trees.

Portable Sawmill Workshop Turners Falls 10/17/12



The North East Foresters Association, with a grant from the USDA Forest Service, sponsored a series of workshop in New England on portable sawmills. The workshop came to Turners Falls on October 15. Participants watch as some logs are sawn into lumber on a Wood-Mizer LT50. The workshop presenter, Dan Cassens (middle-right) shows how to grade lumber. Read Cassens's book on portable sawmills here.

On the Horizon

Oct 31 – Dec 12	UMass Extension Green School, Marlborough, MA, http://extension.umass.edu/landscape/
Nov 1	MA Urban & Community Forestry Challenge Grant Deadline
Nov 2	ISA Certified Arborist Exam, Norway, ME, http://newenglandisa.org
Nov 8-10	TCIA Expo, Baltimore, MD www.tcia.org
Nov 10	Pruning Fundamentals, New England Wildflower Society course, Framingham, MA www.newfs.org
Nov 11-13	New England Chapter ISA 46th Annual Conference, Newport, RI, http://newenglandisa.org
Nov 13	ISA Certified Arborist Exam, Newport, RI, http://newenglandisa.org/
Nov 12-13	Society of Municipal Arborists International Conference & Trade Show, Sacramento, CA http://www.urban-forestry.com/
Nov 14-16	Partners in Community Forestry National Conference, Sacramento, CA http://www.arborday.org/
Nov 15	Trees in the Urban Landscape Symposium, Tower Hill Botanic Garden, Boylston, MA www.towerhillbg.org
Nov 17	Urban Orchards Workshop, Worcester, MA Contact: Worcester Tree Initiative 508-752-1980
Nov 27-28	Chainsaw Operation & Safety, Swansea, MA www.mass.gov/baystateroads
Nov 29	Chainsaw Workshop: Storm Debris Cleanup, Swansea, MA, www.mass.gov/baystateroads
Nov 28-Dec1	ASCA Annual Conference, Rancho Bernardo Inn, San Diego, CA
Nov 30	Chainsaw Workshop: Storm Debris Cleanup, Washington, MA, www.mass.gov/baystateroads
Dec 3-4	Chainsaw Operation & Safety, Washington, MA, www.mass.gov/baystateroads
Dec 8	Shrubs in Winter, New England Wildflower Society course, Framingham, MA www.newfs.org
Dec 31	Tree City, Tree Campus, Tree Line USA Deadline
Jan 16-17	Mass. Tree Wardens' & Foresters' Association 100th Annual Conference Sturbridge, MA, www.masstreewardens.org
Jan 19	Naked Shrubs, New England Wildflower Society, Easthampton, MA, www.newfs.org
Jan 27	Plant Systematics Module 2, New England Wildflower Society, Framingham, MA www.newfs.org

Bureau of Forestry
Department of Conservation and Recreation
251 Causeway Street, Suite 900
Boston, MA 02114

Eric Seaborn, Program Coordinator
eric.seaborn@state.ma.us, (617) 626-1468

Mollie Freilicher, Community Action Forester
mollie.freilicher@state.ma.us, (413) 577-2966

The Citizen Forester is made possible through a grant from the USDA Forest Service Urban and Community Forestry Program and the Massachusetts Department of Conservation and Recreation, Bureau of Forestry.

If you have a topic you'd like to see covered or want to submit an item to *The Citizen Forester* (article, photo, event listing, etc.), please contact Mollie Freilicher.

Subscribe? Unsubscribe? You are receiving this email because you have requested to receive *The Citizen Forester*. If this is an error or you do not wish to receive this newsletter, please email eric.seaborn@state.ma.us. To sign up, click here.